

Helsdingenia gen.n., a new micronetid genus from Old-World tropics (Aranei: Linyphiidae: Micronetinae)

Helsdingenia gen.n., новый род подсемейства Micronetinae из тропиков Старого Света (Aranei: Linyphiidae: Micronetinae)

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КЛЮЧЕВЫЕ СЛОВА: Пауки, Linyphiidae, Micronetinae, *Helsdingenia*, систематика, новый род, новые виды, Афротропическая область, Ориентальная область.

ABSTRACT: A new micronetid genus *Helsdingenia* gen.n. (type species: *Lepthyphantes ceylonicus* Helsdingen, 1985) is described from Old-World tropics (Afrotropical and Oriental Regions). The genus belongs to the *Bolyphantes-Poecilonea* clade [Saaristo, Tanasevitch, 2000: 256] and at the present consists of four species; *Helsdingenia ceylonica* (Helsdingen, 1985) from Sri Lanka, *H. extensa* (Locket, 1968) from Angola, *H. hebes* (Locket et Russell-Smith, 1980) from Nigeria, all comb.n. ex *Lepthyphantes*, and *H. hebesoides* sp.n. from Indonesia.

РЕЗЮМЕ: Из тропиков Старого Света (Афротропическая и Ориентальная области) описан новый род микронетин *Helsdingenia* gen.n. (типовой вид: *Lepthyphantes ceylonicus* van Helsdingen, 1985). Род входит в кладу *Bolyphantes-Poecilonea* [Saaristo, Tanasevitch, 2000: 256] и на сегодняшний день насчитывает четыре вида: *Helsdingenia ceylonica* (Helsdingen, 1985) из Шри-Ланки, *H. extensa* (Locket, 1968) из Анголы, *H. hebes* (Locket et Russell-Smith, 1980) из Нигерии, все comb.n. ex *Lepthyphantes*, and *H. hebesoides* sp.n. из Индонезии.

Introduction

This paper describes a new micronetid genus of the family Linyphiidae from the Afrotropical and Oriental Regions. It includes four species, viz. *Lepthyphantes ceylonicus* Helsdingen, 1985 (from Sri Lanka), *L. extensus* Locket, 1968 (from Angola), *L. hebes* Locket et Russell-Smith, 1980 (from Nigeria) and a new species from Indonesia. The new genus belongs to the *Bolyphantes-Poecilonea* clade of the subfamily Micronetinae and is characterized by the presence of the pseudoscape in the female epigyne and the simple, mitten-

shaped embolus of the male palp [Saaristo, Tanasevitch, 2000: 256].

It is worth of noting here that Locket [1980] stated that *L. hebes* and *L. extensus* are related with *L. bihamatus* (Emerton, 1882) from North America. This is true in the sense that they all belong to the *Bolyphantes-Poecilonea* clade. The “bifid arm of paracymbium” which lead Locket (1980) to compare *L. hebes* and *L. extensus* with *L. bihamatus* is a character common for a large genus-group in *Bolyphantes-Poecilonea* clade. *L. bihamatus* belongs decidedly in *Poecilonea* [Saaristo, Tanasevitch, 2000].

The material of this study was collected by the emeritus curator Pekka T. Lehtinen (Turku) and preserved in the Zoological Museum, Turku University (Turku, Finland).

Abbreviations:

MZT — Museum of Zoology, Turku University,

BC — bursa copulatrix

DS — distal part of scape

EP — embolus proper

FE — extension of the cavity wall

L — lamella characteristic

PS — pseudoscape

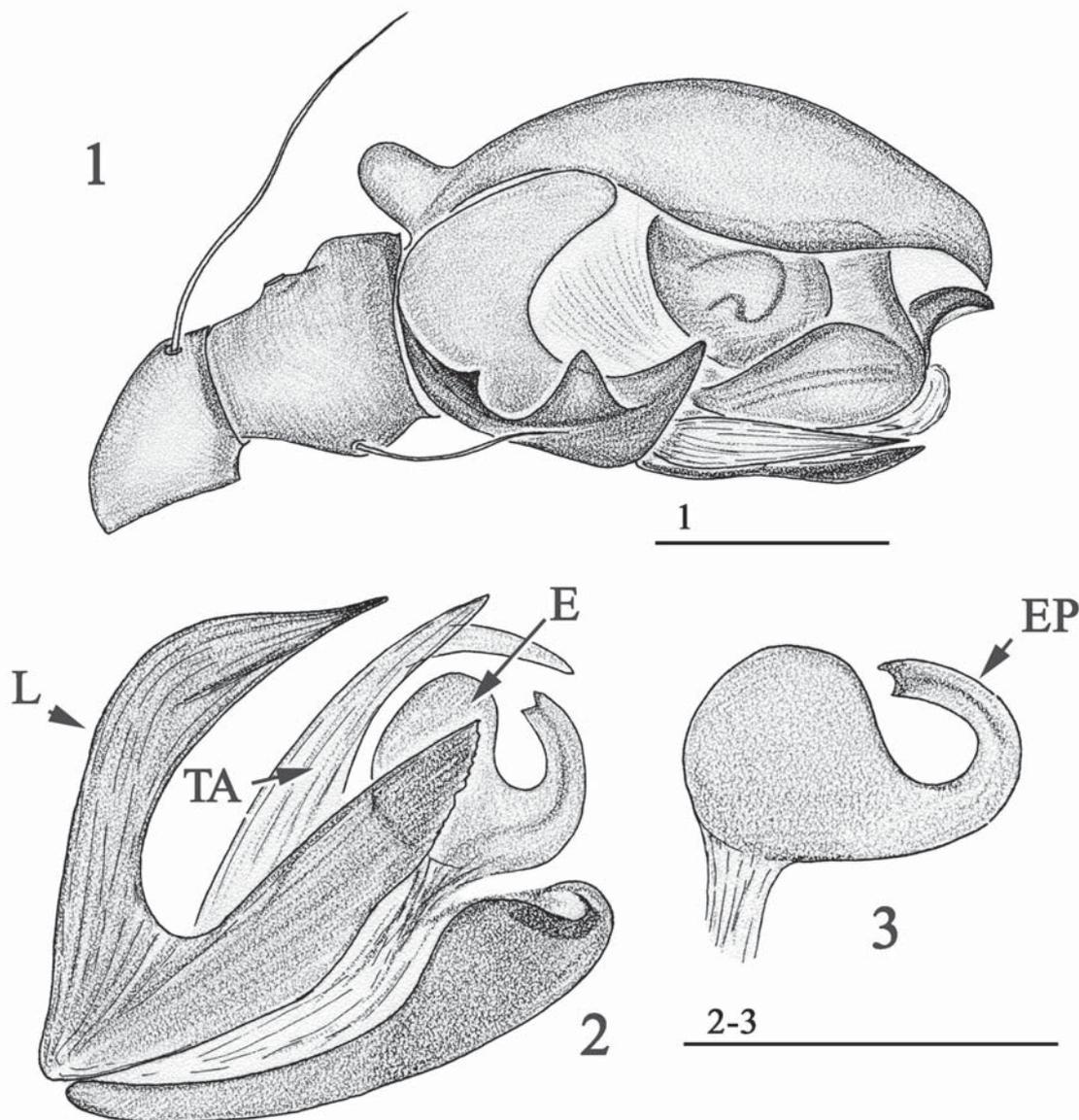
TA — terminal apophysis

The chaetotaxy is given in the following formula: Ti I: 2-1-1-2(1). This stands for: tibia I has two dorsal, one pro- and one retrolateral spine, and two or one ventral spines (the apical spines are herewith disregarded). The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are in mm. Scale in Figures 0.1 mm.

Descriptions of new taxa

Helsdingenia gen.n.

TYPE SPECIES. *Lepthyphantes ceylonicus* Helsdingen, 1985 from Sri Lanka.



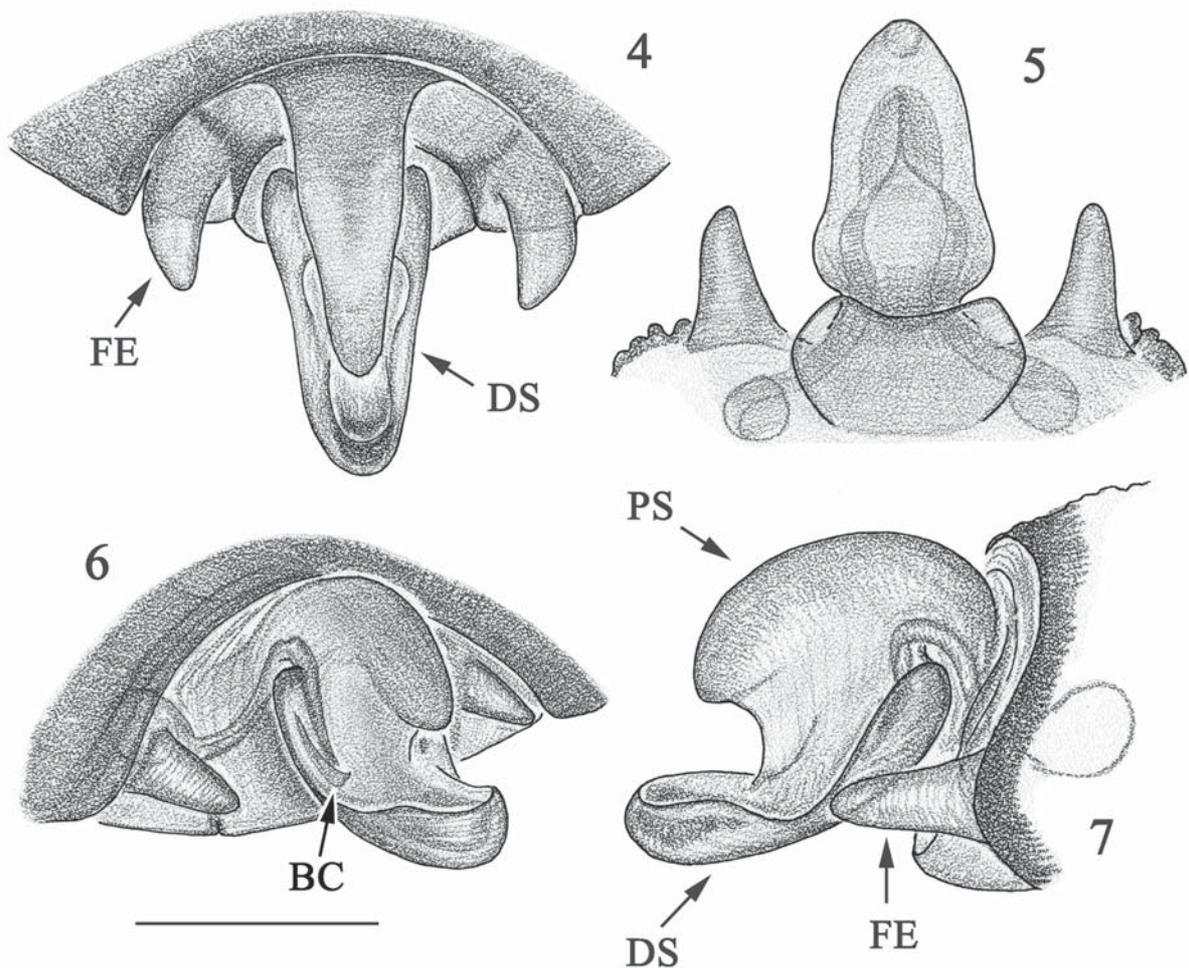
Figs. 1–3. *Helsdingenia ceylonica* (Helsdingen, 1985) from Sri Lanka: 1 — right palp, retrolateral view; 2 — embolic division, ventral view; 3 — embolus, ventral view.

Рис. 1–3. *Helsdingenia ceylonica* (Helsdingen, 1985) экз. из Шри-Ланки: 1 — правая пальпа, ретролатерально; 2 — эмболюсный отдел, вентрально; 3 — эмболюс, вентрально.

ETYMOLOGY. The generic name is derived from the surname of Dr. P.J. van Helsdingen (Leiden, The Netherlands) whose contribution to knowledge of the taxonomy of the family Linyphiidae has been remarkable. Especially his excellent work [Helsdingen, 1965] about the sexual behaviour of *Lepthyphantes leprosus* (Ohlert, 1865) has been for immense value for our work with the subfamily Micronetinae. The gender of the new genus is considered feminine.

DIAGNOSIS. *Helsdingenia* gen.n. is a typical member of the *Bolyphantes-Poecilonea* clade [Saaristo, Tanasevitch, 2000: 256]. Its monophyly is supported by the finger-like extensions of the cavity wall [Saaristo, Tanasevitch 1996, Fig. 6] of the female epigyne on either sides of the scape (Fig. 4: FE). Also the crooked, elongated embolus proper is diagnostic (Fig. 3).

DESCRIPTION. Small-sized (1.20–2.45 mm), relatively pale-colored micronetids. Abdomen with a dorsal pattern of some four pairs of dark spots which may be connected with each other to form two more or less parallel stripes, sides and venter dark colored. Chaetotaxy: Ti I: 2-1-1-2(1), II: 2-0-1-1(0), III–IV: 2-0-0-(0); Mt I–III with a dorsal spine. Tm I: 0.13–0.20. Male palpal cymbium with a small posterior horn; paracymbium apically bifid; embolus small and simple with long, curved embolus proper; terminal apophysis long, narrow and two pointed; lamella characteristic large, in the middle deeply incised. Female epigyne with finger-like extensions of cavity wall on either sides of scape; scape with well developed pseudoscape; distal part of scape disc-like with apical pit, lateral pockets absent, copulatory pockets on both sides of junction of distal and median part of scape.



Figs. 4–7. Epigyne of *Helsdingenia ceylonica* (Helsdingen, 1985) from Sri Lanka: 4 — ventral view, 5 — dorsal view, 6 — ventro-lateral view, 7 — lateral view.

Рис. 4–7. Эпигина *Helsdingenia ceylonica* (Helsdingen, 1985), экз. из Шри-Ланки: 4 — вентрально, 5 — дорсально, 6 — вентролатерально, 7 — латерально.

SPECIES INCLUDED. *Helsdingenia ceylonica* (Helsdingen, 1985) comb.n., *H. extensa* (Locket, 1968) comb.n., *H. hebes* (Locket & Russell-Smith, 1980) comb.n. (all ex *Leptyphantes*), and *H. hebesoides* sp.n.

DISTRIBUTION. Old-World tropics.

Helsdingenia ceylonica (Helsdingen, 1985), **comb.n.**
Figs. 1–7.

Leptyphantes ceylonicus Helsdingen, 1985: 20, f. 9,10 (D♀).

MATERIAL EXAMINED. 1 ♀ (MZT AM 1205), NEPAL, Bagmati, Bodegaon-Kitini, Hattiban, forested hill between cultivated fields, 12.V.1979, P. Lehtinen leg.; 2 ♂♂, 4 ♀♀ (MZT AM 1204), SRI LANKA, Nuwara Eliya, Haggala District, in grass and litter along a mountain brook, 18.XI.1972, P. Lehtinen leg.; 4 ♀♀ (MZT AM 1203), Nuwara Eliya, Bambarakelle District, wet slope with grass, 17.XI.1972, P. Lehtinen leg.; 2 ♂♂, 1 ♀ (MZT AM 1202), Nuwara Eliya, Labookellie District, stony brook, 17.XI.1972, P. Lehtinen and I. Oksala leg.; 1 ♀ (MZT AM 1265), Pussellawa, 1.II.1969, P. Lehtinen leg.

DIAGNOSIS. *Helsdingenia ceylonica* is close to *H. extensa*. The male of the former species has almost straight mesal branch of the lamella characteristic (Fig. 2); *H. extensa*

has it distinctly curved laterally [Locket, 1968: Fig. 24C]. The female of *H. ceylonica* has a more elongated epigyne and accordingly e.g. the apical part of the scape is ca. 2 times as long as wide (Fig. 4) while it in *H. extensa* is about 1.5 times as long as wide.

DESCRIPTION. Female well described by Helsdingen [1985]. Male. Total length 1.50. Carapace 0.65 long, 0.58 wide; pale brown almost yellow with wide grey border and grey median stripe. Chelicerae 0.25 long. Legs yellow. Length of leg I: 5.24 (1.33 + 0.25 + 1.33 + 1.45 + 0.88), IV — 3.69 (1.08 + 0.20 + 0.85 + 0.98 + 0.58). Tm I: 0.19. Chaetotaxy: Ttl: 2-1-1-2, II: 2-0-2-1, III–IV: 2-0-0-0; MtI–III: 1-0-0-0. Abdomen 0.88 long, 0.53 wide; dorsal pattern variable, but main arrangement as in Figs 8–9. Palp as in Figs 1–3.

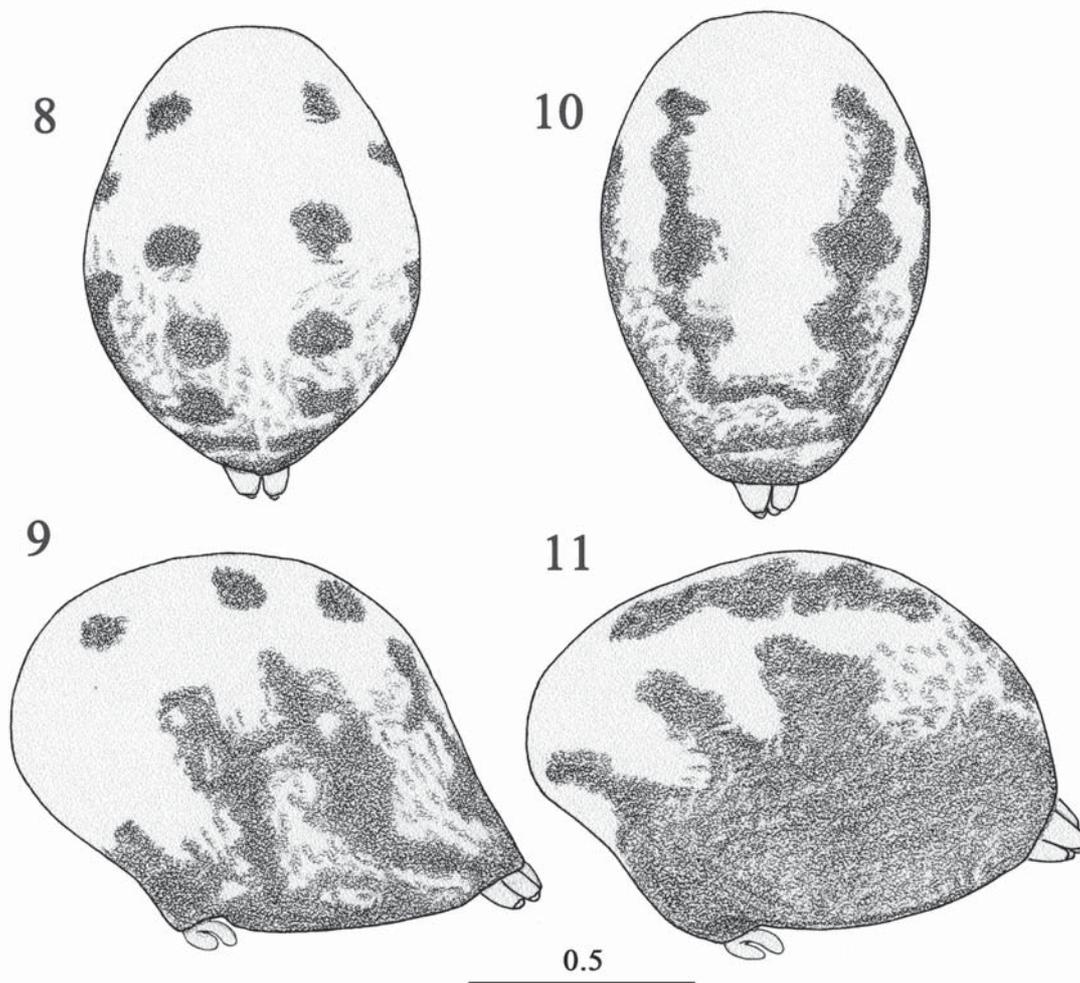
DISTRIBUTION. Sri Lanka, Nepal.

Helsdingenia extensa (Locket, 1968), **comb.n.**

Leptyphantes extensus Locket, 1968: 96, f. 23A–C, 24A–C (D♀).

Leptyphantes bifurcus Locket, 1968: 88, f. 16A–C (D♂; not ♀ = *L. locketi* van Helsdingen, 1977).

Leptyphantes extensus Helsdingen, 1977: 171, f. 72c–g, 73a–f (♂♀ = *L. bifurcus* Locket, 1968).



Figs. 8–11. Female abdomen of *Helsdingenia ceylonica* (Helsdingen, 1985) (8–9) and *H. hebesoides* sp.n. ♀ paratype (10–11): 8, 10 — dorsal view, 9, 11 — lateral view.

Рис. 8–11. Брюшко самки *Helsdingenia ceylonica* (Helsdingen, 1985) (8–9) и *H. hebesoides* sp.n., паратип ♀ (10–11): 8, 10 — дорсально, 9, 11 — латерально.

MATERIAL EXAMINED. None.

DIAGNOSIS. See *Helsdingenia ceylonica*.

DESCRIPTION. Well described by Locket [1968].

DISTRIBUTION. Angola, Tanzania, Kenya, Cameroon, Comoro Island, Madagascar, St. Helena Island [Scharff, 1990].

Helsdingenia hebes (Locket & Russell-Smith, 1980)
comb.n.

Lepthyphantes hebes Locket & Russell-Smith, 1980: 88, f. 128–132 (D♂♀).

MATERIAL EXAMINED. None.

DIAGNOSIS. See *Helsdingenia hebesoides* sp.n.

DESCRIPTION. Well described by Locket & Russell-Smith [1980].

DISTRIBUTION. Nigeria, Cameroon [Scharff, 1990].

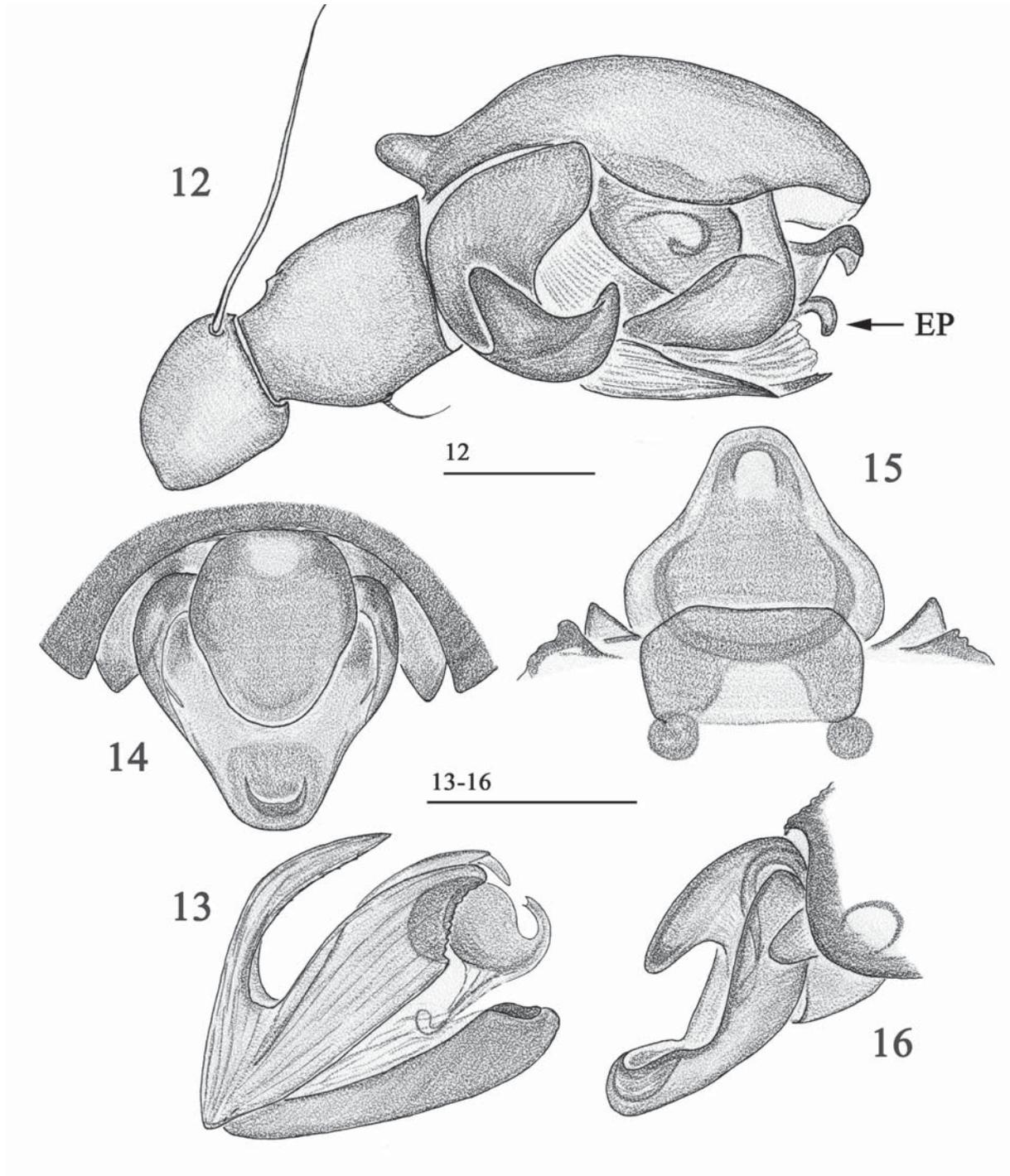
Helsdingenia hebesoides sp.n.
Figs 10–16.

MATERIAL EXAMINED. Holotype ♂ from INDONESIA (MZT AM 1206), Sumatra, Sumareta Barat, Padangpanjang

District, Gunung Singalang, 1900 m, jungle, in litter, 25.IX.1978, P. Lehtinen leg. Paratypes: 1 ♂, 1 ♀ (MZT AM 1206), same locality and date together with holotype; 2 ♀♀ (MZT AM 1207), Padangpanjang District, Gunung Singalang, 1800–2300 m, in litter, 27.IX.1978, P. Lehtinen leg.; 1 ♀ (MZT AM 1208), Padangpanjang District, Gunung Singalang, 1800–2300 m, in litter, 27.IX.1978, P. Lehtinen leg.

DIAGNOSIS. *H. hebes* and *H. hebesoides* are close to *H. ceylonica* and *H. extensa* from which their males differ in blunter lateral extension of the paracymbium and females in considerably broader apical part of the scape. The male of *H. hebesoides* differs notably from that of *H. hebes* by having posteriorly pointing cymbial horn, longer lateral paracymbial extension, and broader mesal arm of the lamella characteristic with differently shaped apex and the female by having longer pseudoscape and almost triangular apical part of the scape.

DESCRIPTION. Male. Total length 1.88. Carapace 0.78 long, 0.60 wide; pale brown. Chelicerae 0.33 long. Legs pale brown. Length of leg II: 5.03 (1.25 + 0.25 + 1.25 + 1.43 + 0.85), other legs broken. Chaetotaxy unknown (see description of female). Abdomen 1.13 long, 0.68 wide; dorsal pattern variable, but main arrangement as in Figs 10–11. Palp as in Figs 12–13.



Figs. 12–16. *Helsingenia bebesoides* sp.n. ♂ holotype (12–13) and ♀ paratype (14–16): 12 — right palp, retrolateral view; 13 — embolic division, ventral view; 14–16 — epigyne, 14 — ventral view, 15 — dorsal view, 16 — lateral view.

Рис. 12–16. *Helsingenia bebesoides* sp.n., голотип ♂ (12–13) и паратип ♀ (14–16): 12 — правая пальпа, ретролатерально; 13 — эмболюсный отдел, вентрально; 14–16 — эпигина, 14 — вентрально, 15 — дорсально, 16 — латерально.

Female. Total length 2.13 (largest specimen 2.45, smallest 1.88). Carapace 0.88 long, 0.70 wide, pale brown with narrow dark margin. Chelicerae 0.40 long. Legs pale brown. Length of leg I: 5.68 (1.50 + 0.30 + 1.43 + 1.55 + 0.90) other

legs mainly broken. Chaetotaxy: Ti I: 2-1-1-2, II: 2-0-1-1(2). Tm I: 0.17. Abdomen 1.30 long, 0.88 wide, dorsal pattern as in Figs. 10–11. Epigyne as in Figs. 14–16.

DISTRIBUTION. Indonesia: Sumatra.

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